



# inps journal

Indiana Native Plant Society

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## Bloomington's Crestmont Park: Thoroughly Heart Warming

**By Gillian Field**

The excitement and hope that more than one thousand hours of loving care has brought to Crestmont Park is thoroughly heartwarming. After tackling invasive species, and a year after sowing acorns, we are thrilled to share the joy and exhilaration of restoring an urban greenspace.

Nestled in a corner of Bloomington, Crestmont Park comes under the care of the city's Parks and Recreation Department. It has well cared-for basketball courts and a new playground that might distract your attention from the neglected landscape.

The landscape contained 14 acres of mown grass, an open ephemeral creek, storm water "explosions" directed from the adjacent Housing Authority hardscape, and remnant trees that were broken, forlorn, and torn. However, its land formations and nooks of forest

remnants stirred our restorer's imagination like no other greenspace in the city system.

Lured by the call of native species, staff and volunteers calmly tackled the woody invasive species bordering the large mown areas for over four years. The community was invited to hours of cutting

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bicep-width climbing purple wintercreeper vines (*Euonymus fortunei*) and mature and emerging Asian bush honeysuckle (*Lonicera* spp.) and multiflora rose (*Rosa multiflora*). We were fortified by our collective knowledge and sensitivity to the desired outcome, namely allowing native species to flourish where they have evolved.

To accomplish this, we had to think creatively when resources weren't available to move the invasive plant debris from our work area. Instead, we chose to reimagine the mowed areas as newly forested urban sanctuaries by bordering selected space with these undesirable and awkwardly shaped branches.

The sowing of acorns and tree seeds provided one of the most notable outcomes of our effort. More than 20 intentionally planted native tree seedlings have emerged

*Crestmont — continued on page 2*

Courtesy of G. Field



Above: Volunteers Zil Then, Paul Murphy, and Robert Harman work on controlling invasive shrubs at Crestmont Park, Bloomington, Indiana.

Right: Ray Major and Eve Cusack inspect which white oak (*Quercus alba*) seedling to keep.





## Crestmont — continued from front page

under the watchful care of volunteers. Careful volunteer training has included weeding around plants, selective caging to protect from deer-browse, mulching with cut grass

and leaves, and the hard task of choosing which oak seeding can stay in preference to the other baby oaks nestled in a tight spot.

In addition to these intentional plantings and the grooming that takes place in these restoration areas, surprises have revealed the remarkable emergence of native remnants that have survived more than 50 years of seasonal mowing. One hill now showcases a flourish of asters (*Symphyotrichum* spp.), oldfield cinquefoil (*Potentilla simplex*), broom sedge (*Andropogon virginicus*), violets (*Viola* sp.), and native plantain (*Plantago* sp.).

This portion of Bloomington, locally named Pigeon Hill, was once purported to be the home of the Passenger Pigeon. This specter of loss now regains new hope as we call our highest outpost Binocular Hill. The new name highlights the experience we offer children when we invite them to try using mini-binoculars to examine the tops of existing trees for leaf buds and fruits as well as bird nests and small animals.

When you consider the feeling of peace that native plants and landscapes can offer and the benefits of restored urban greenspace as enclaves for wildlife, then the opportunity for collective effort is thrilling. Crestmont Park has warmly responded to our love and attention. We hope we have captured your imagination to uncover your next urban greenspace project.

*We recognize that the city of Bloomington, Indiana sits on Native land which is the traditional homelands of the Miami, Delaware, Potawatomi, and Shawnee people and we acknowledge they are past, present, and future caretakers of this land.*

*Gillian Field, a member of the South Central Chapter of INPS, is Urban Greenspace Outreach Coordinator for City of Bloomington Parks & Recreation Department.*



Local youngsters demonstrate why this vantage point is called Binocular Hill.



Spotting a newly emerged tree seedling in the formerly mowed area.



Several species of acorns ready for sowing.



# Dogwood, from a Canine's Point of View

## By Barley Coopersmith

I love springtime walks with my pet human, Karin. The smells of new life are everywhere — moist soil with its musty microbes, flowering trees with smells ranging from sweet to foul, and lots of fellow animals on the move, marking trees and sending amorous messages.

Spring also has visual appeal, even for a dog. My neighborhood has numerous flowering dogwood trees. I am told by Karin that they also go by the name *Cornus florida*. I used to think that they were named after my species of animal, *Canis familiaris*. But it turns out that the early spelling was dagwood and that the antiquated word dagge implies a dagger or sharp object. The hard, dense wood of this tree was used for skewers by butchers. More important to me, however, is that the ends of cut twigs can be fashioned into a kind of natural toothbrush and I am all in favor of good dental hygiene. Of course, my preference is chewing my antler toy or bone.

As my neighborhood enters mid-spring, many dogwoods send out their blooms. My dog ancestors had native American caretakers, and they used the flowering of dogwood as a sign that it was time to plant their corn. When folks like my Karin came to North America, they brought with them some new ways of looking at dogwood blossoms. Since springtime included an important religious holiday called Easter, they thought about possible connections that this tree might have with Jesus. Some opined that the hard, but often crooked wood was used to make the cross. Of course, this is impossible since flowering dogwood only grows in North America. They also took note of the four large white bracts that surround the cluster of small flowers. The four bracts sort of make a cross-shape, plus each one has a discolored scar at its apex. Some wondered, could the scar be wounds from nails used in crucifixion? It makes a dog shudder to think about some of the bad things that people do to each other.

You may ask how do dogs recognize flowering dogwood? Of course, I have good eyesight as well as an acute sense of smell. I also have a keen sense of hearing. But when it comes to dogwood the answer is that I recognize it by its "bark!" [Get it? Dogs do have a sense of humor, you know.]

Dogwood bark is dark, rough, and broken into

small, thin, rounded scales that some liken to coins. Others suggest that the bark resembles alligator skin. Regardless of your description, my nose detects interesting chemicals called glucosides. Going back to those native Americans again, they used bark to treat a range of ailments such as colic and as a curative for malarial fevers. When Karin did some web-research on the subject she found that the latter was especially known to the people in the American South during their "Civil War."

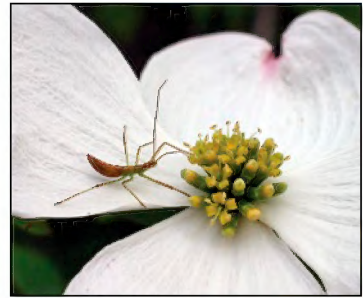
These human problems can be depressing for a fun-loving canine. So I prefer to quickly move on to other aspects of my favorite tree species. It turns out that like canines, dogwood plays important roles in the natural world. Those fleshy autumn fruits feed songbirds, turkeys, and best of all, small mammals that I like to chase. Some 75 animal species feed on the red drupe fruits and their seed. They are rich in calcium and fats. Of course, it should not be a surprise that what I refer to as creepy-crawly animals also love dogwood. The caterpillars of the spring azure butterfly (*Celastrina ladon*) and cecropia silkmoth (*Hyalophora cecropia*) feed on their leaves.

In late autumn I like to play in the fallen, red leaves. And here is one more way that dogwood is good for my neighborhood. Those leaves decay quickly and release minerals into the topsoil. This, and the fact that it remains a small tree (only reaching about 30 feet tall), makes it perfect for urban forestry projects. Just be aware, though, that these trees (especially when young) are intolerant of extended drought, and trees of all ages benefit from some buffering from full day sun.

So next time your dog takes you on a springtime walk, try to slow down and experience our beautiful world. And, in particular, have him or her point out more of the special qualities of my favorite tree, flowering dogwood.

*Barley is a five-year old Bernese Mountain dog who resides in south central Indiana. He received his education at "Scout's Honor" puppy school in Bloomington Indiana.*

*A cluster of complete flowers form a button-like cluster amid the white bracts.*



P. Rothrock



*The large white bracts of flowering dogwood arise from the covering of the flower bud. The discolored "scars" at the apex of the bracts contain the remains of the bud scale.*



Courtesy of Scout's Honor



# INPS Photo Contest, 2024

## PLANT PORTRAIT WINNERS *By Greg Shaner*



*First Place: Great chickweed (Stellaria pubera) by Sarah Brackney*

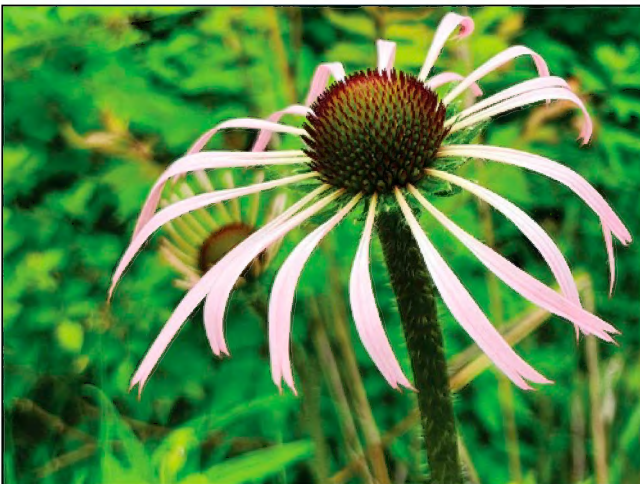
The INPS Photo Contest was created in 2019 to stimulate people to take photographs of native plants that could be used on the INPS website, in its Plant Finder, and for other publications. During the first three years Lee Casebere coordinated the contest, and I followed in his footsteps from 2022 to 2024.

Many excellent images have been added to the INPS library. The 2024 photo contest invited entries in two categories: Plant Portraits and Wetland Plants. Our congratulations to first place winners Sarah Brackney and Isaac Morris as well as to Kimberly Lane, Michael Harrold, and Laura Fuderer.

Over the years contest photographs have proven valuable in enabling INPS to further its mission. However, because we find now that many submissions are of species for which we already have sufficient images, the 2024 photo contest is the last INPS plans to hold for the time being. Although images of many plant species can now be found on the internet, we always prefer to have images taken in Indiana that highlight the enthusiasm of our INPS membership. So, in order to fill gaps in the INPS photo library going forward, we have decided to solicit photos that are needed for particular purposes. See the Plant Finder sidebar for some current photo requests.

Another immediate opportunity for avid camera buffs is to consider documenting outings by your local INPS chapter. Send to the Journal Editor ([journal@indiananativeplants.org](mailto:journal@indiananativeplants.org)) a pair of photos – one showing some or all of the participants in the chapter outing, and a second that features the most outstanding native plant of the day. Include caption information for each photo and the name of the photographer.

*Greg Shaner is a member of the West Central chapter of INPS and coordinated the photo contest from 2022 through 2024.*



*Second Place: Pale purple-coneflower (Echinacea pallida) by Kimberly Lane.*



*Third Place: Ohio spiderwort (Tradescantia ohiensis) by Kimberly Lane.*



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## WETLAND PLANT WINNERS



First Place: Lizard's-tail (*Saururus cernuus*) by Isaac Morris.



Second Place: Common buttonbush (*Cephalanthus occidentalis*) by Michael Harrold

### *Photographers, we need your help!*

We are working on expanding the Indiana Native Plant Finder on the INPS website. We're looking for photos of the flowers, stems, leaves, seeds, and growth-habit of the following species. If you have photos, please email them to [facilitator@indiananativeplants.org](mailto:facilitator@indiananativeplants.org) with the species name in the subject line.

*Agastache nepetoides* – yellow giant-hyssop  
*Agastache scrophulariifolia* – purple giant-hyssop  
*Allium stellatum* – autumn onion  
*Callirhoe involucrata* – purple poppy-mallow  
*Carex albicans* – blunt-scaled oak sedge  
*Phlox glaberrima* – smooth phlox  
*Phlox maculata* – wild sweetwilliam  
*Phlox pilosa* – downy phlox  
*Solidago riddellii* – Riddell's goldenrod



Third Place: Duck-potato (*Sagittaria latifolia*) by Laura Fuderer.



# Sedges (genus *Carex*): Results of a Horticultural Trial

**By Paul Rothrock**

"*Carex* [sedges] offer beauty, functionality, and ecological value to landscapes" (Hoadley 2022).

I knew it all along! In fact, my treatment of the genus *Carex* (Rothrock 2021) included a chapter on using these plants in the landscape. But now it has been made *official* by a horticultural organization, the Mt. Cuba Center in Hockessin, Delaware. They are considered leaders in native plant research. Their work includes a native plant public garden over 1000 acres in size.

The average person does not know what a sedge is and so it may take time to sell a message of their utility. In brief, grasses are sedge-like plants, which is to say that sedges are wind-pollinated monocots with inconspicuous flowers and linear leaves. Sedges are frequently known through the mnemonic that "sedges have edges," a nod to the tendency of their stems to be triangular in cross-section. In contrast, stems of grasses are more or less oval or flattened.

Sedges have other more technical differences from grasses exhibited by the inflorescences and fruits (Rothrock 2021).

Since 2002 the Mt. Cuba Center has run trial garden studies on a range of species native to the Mid-Atlantic region of the U.S., including those from the genus *Hydrangea*, *Echinacea*, *Helenium*, *Phlox*, *Monarda*, *Baptisia*, *Coreopsis*, *Heuchera*, and what historically was called *Aster*. Their trials, which should be of interest even here in the Midwest, consider both the horticultural and the ecological value of the species tested (see <https://mtcubacenter.org/trial>).

The Mt. Cuba Center completed a trial of 65 species and five cultivars of *Carex* in 2022 (Hoadley 2022). They confirm that the genus, because of its great diversity of species, has potentially valuable ground covers and individual specimen plants (with visually attractive inflorescences). It even has substitute turf species. Sedge diversity includes many species that are semi-evergreen and that

*Fringed sedge stands about 3 feet tall and tolerates sunshine. It can serve as an accent plant in rain gardens.*



P. Rothrock

*Grass sedge (aka James' sedge) grows to about one foot tall in shady settings; it can tolerate high mowing or serve as a substitute for Liriope.*



*Plantain-leaf wood sedge (aka seersucker sedge) favors shady, woodsy settings. Its broad leaves hold up fairly well in the summer and the inflorescences provide an eye-catching rich-purple in the spring.*





# Florathon 2025

come in a range of shades of green and a range of textures. Most are clumping species that are especially good in small gardens, but seven of the trial-species spread by rhizomes. Some spread slowly, such as Wood's stiff sedge (*C. woodii*) and common oak sedge (*C. pensylvanica*); others rapidly (under ideal conditions), e.g., riverbank sedge (*C. emoryi*).

In their three-year trial, supplemental watering was only applied in year one and no fertilizer was used throughout. The soil was an average clay-loam with a pH of 6.5. Thus, conditions available in most home landscapes. Each species was assessed under full sun and shade conditions. The only other manipulation was to cut back the foliage in late winter. Out of the 65 species, 13 of their high-ranking species occur in Indiana. Ten are among those I recommended for consideration here in the Midwest (Rothrock 2021).

The report suggests species for dry soils and for wet to moist soils and as habitat plants. Since I am not at all enamored with the modern American lawn composed largely of Kentucky blue grass (*Poa pratensis*), I was especially pleased to see suggestions for lawn alternatives. The evaluation especially thought that Wood's stiff sedge had potential as did grass sedge (*C. jamesii*), if tufts were planted in a close array. Three other species were on their list.

As you consider changes to your native plant landscape for 2025, check out this report and consider sedge species with their novel foliage, inflorescence, and ecological characteristics. Your neighbors will be asking you "what is that strange and marvelous plant in your landscape?"

## References

- Hoadley, S. 2022. Research Report: *Carex* for the Mid-Atlantic Region. Mt. Cuba Center, Hockessin DE. Available at <https://mtcubacenter.org/trials/carex-for-the-mid-atlantic-region/>.
- Rothrock, P.E. 2021. Sedges of Indiana and the Adjacent States: Volume II. The *Carex* Species. Indiana Academy of Science, Indianapolis.

*Paul Rothrock, author of two-volumes on the "Sedges of Indiana ..." (Indiana Academy of Science), is a member of the South Central Chapter of INPS.*

There is still time to join in the annual fun and friendly competition by organizing your own Florathon team. Florathon runs from April 1 to May 31. It encourages learning native flora, grows INPS membership, and helps to match funds from the Sam Shine Foundation for the INPS Program Facilitator position. Visit the INPS Florathon page (<https://indiananativeplants.org/inps-sponsored-events/florathon/>) for all the whys and wherefores.



Courtesy of Mike Homoya

*One does not need to be an expert to form or to be part of a Florathon team. In this case, however, Florathon provided Division of Nature Preserves retirees an excuse to revisit favorite locales, including Rocky Hollow – Falls Canyon Nature Preserve in Parke County. The team, consisting of John Bacone, Lee Casebere, Mike Homoya, Roger Hedge, and Cloyce Hedge, went out in 2019 and again in 2024. The 2019 effort recorded 72 species but only 42 in 2024 since their old legs covered less terrain.*

## Horticulturally High-Ranking Species of *Carex* Found in Indiana

(in rank order)

- Carex woodii* - Wood's stiff sedge
- Carex bromoides* - brome tussock sedge
- Carex haydenii* - long-scaled tussock sedge
- Carex stricta* - common tussock sedge
- Carex emoryi* - riverbank sedge
- Carex sprengei* - long-beaked sedge
- Carex pensylvanica* - common oak sedge
- Carex muskingumensis* - swamp oval sedge
- Carex albicans* - blunt-scaled oak sedge
- Carex jamesii* - grass sedge
- Carex crinita* - fringed sedge
- Carex leavenworthii* - dwarf bracted sedge
- Carex plantaginea* - plantain-leaf wood sedge

Finding sources of plants from Indiana populations may take some research and may only be available by pre-order. As an example, check out <https://nativeplantsunlimitedshop.com>. Plants from Wisconsin are available at <https://www.prairienursery.com/>.



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*To promote the appreciation, preservation, scientific study, and use of plants native to Indiana.*

*To teach people about their beauty, diversity, and importance to our environment.*

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## Wonder — continued from back page

was purchased on September 22, 1967. At the time I was 17 years old and barely into my senior year of high school. At that age, what possessed me to buy such a book as that?

During my youth, my dad and his brother ran a car dealership and service department in a small town in northwestern Ohio. Our family car changed often and was usually a new car that was driven for a while and then sold at the dealership as a low mileage “demo” model. But as the Casebere kids became teenagers and got our driver’s licenses, we were relegated to driving older used cars. For a few years, we had the good fortune of driving a high mileage beat up station wagon that we affectionately dubbed “The Pig.” I say “good fortune” because it was actually a great car for teenagers since, given its rough life, there wasn’t much we could do to hurt it!

As an aspiring young naturalist, a formative influence back in those days was the farm of my maternal grandparents. It held great interest to me, and I spent countless hours exploring its diverse habitats. The farm had many fields of pasture and hay that were attractive to grassland birds like meadowlark, bobolink, grasshopper sparrow, and savannah sparrow. Just try to find those birds on the farms of today! Brushy areas had yellow warbler, indigo bunting, brown thrasher, and song sparrow. There also was a small gravel pit that had a sizable cricket frog population and a colony of bank swallows. It was some years later that I finally realized how special that was – most farms had barn swallows, but very few had a bank swallow colony!

Their woodland supported the full panoply of native flora, including delightful spring ephemerals, and, as a result, numerous species of forest birds nested there including such choice ones as scarlet tanager, Acadian flycatcher, and red-eyed vireo. My favorite was the wood thrush. In those early years I was enchanted with wood thrush music, a thrill which continues to this day.

In *The Sense of Wonder*, Carson says that “No child should grow up unaware of the dawn chorus of the birds in spring.” Although certainly not children, but not full-fledged adults either, I drummed up the courage to invite my high school girlfriend to my grandparents’ woodland

to hear the chorus.

Early one foggy morning, I picked her up in The Pig and we went off to hear wood thrush music and to see their forest world. While I am certain we met that goal, what I remember most of all, though, was that when we returned to The Pig the battery was dead. I had forgotten to turn off the headlights from driving in the fog that morning! We walked to the gravel pit, then through dew-covered pastures to my grandparents’ house to call Casebere Motor Sales to send someone to jump start The Pig. Embarrassing? Definitely! But for me, the car battery experience more firmly ingrained a memory that has survived for over 50 years that began with

me trying to pass on a sense of wonder to my girlfriend when we were still in our teens. After high school, she and I went our separate ways, but I sometimes wonder if she still remembers that morning, The Pig, and the dead battery. Does she remember the dawn chorus of birds? ... or perhaps the soft shroud of fog that embraced the woodland tapestry?

*The Sense of Wonder* can be read in less than one hour. I believe its message is important for everyone regardless of age. It certainly is worth your time to read it. More importantly, if you don’t have a sense of wonder, get one! Do not be afraid to get wet and dirty – but do not drain down your car battery. And be sure to share that sense of wonder with others.

### Reference

Carson, R. 1965. *The Sense of Wonder*. Harper & Row. New York, NY.

*Lee Casebere, a member of the Central Chapter of INPS, is a naturalist, ecologist, nature photographer, and retired assistant director of IDNR’s Division of Nature Preserves. He is a somewhat frequent contributor to this Journal.*



*The flute-like song of the wood thrush (Hylocichla mustelina) continues to grace our Indiana woodlands, but the population is declining due to habitat loss. Our thanks to Indianapolis resident, Dr. Ryan Sanderson, for this recent image.*



# Sedge Recruitment Stands Out

**By Kevin Tunesvick**

Ecological restoration is a relatively new and rapidly evolving field. The techniques used to restore natural areas have the potential to increase plant diversity but may also result

*Cumberland sedge (Carex cumberlandensis) was among the sedge species whose number of individuals increased following a prescribed burn.*



K. Tunesvick

in collateral damage. Indeed, one of the most powerful restoration tools, prescribed fire, has the potential for significant enhancement of diversity or substantial collateral damage if applied at the incorrect intensity or season. Therefore, monitoring a plant community before and following prescribed fire is vital to ensure that the assumed benefits are materializing.

The Laura Hare Preserve at Blossom Hollow, owned and managed by the Central Indiana Land Trust, lies in

southern Johnson County at the terminus of the most recent episode of glaciation. Its location at the interface of the Tipton Till Plain Natural Region and the Brown County Hills Section of the Highland Rim Natural Region results in a unique flora consisting of species characteristic of both natural regions.

Most of the preserve is wooded with oaks (*Quercus* spp.) and hickories (*Carya* spp.) on the ridges and south and west facing slopes while other aspects have mesic species such as tulip tree (*Liriodendron tulipifera*), northern red oak (*Quercus rubra*), bitternut hickory (*Carya cordiformis*), American beech (*Fagus grandifolia*), and sugar maple (*Acer saccharum*). The mature second growth oak-hickory woodlands are characterized by a full

canopy of oaks and hickories with mid-story and sapling layers dominated by sugar maple

and lesser numbers of American beech and red maple (*A. rubrum*). In order to thin the mesic species and promote oak-hickory regeneration, prescribed fire was introduced into these woodlands in late fall of 2020.

The fire had been planned for several years, so monitoring transects were set up in 2018 in both the treatment (prescribed fire) and control (outside the burn unit) areas by Eco Logic, a restoration and consulting firm based in Bloomington, Indiana. Pre-burn data were taken along 4 treatment transects and 2 control transects. Each 50 m-long transect had 6 herbaceous monitoring quadrats<sup>1</sup> (each 1×1m) and 3 woody monitoring quadrats (each 2×2 m). Pre-burn data were taken for both woody and herbaceous species during the 2018 growing season.

Monitoring the transects resumed during the 2021 growing season following the prescribed fire. It was quickly evident that the prescribed fire resulted in heavy recruitment of sedge (*Carex* spp.) seedlings from the seed bank<sup>2</sup> in the treatment transects. This recruitment became the focus of the herbaceous portion of the study, especially since sedges represent a major component of the woodland herbaceous flora.

The frequency or total number of sedge crowns in the treatment transects rocketed from 20 in the pre-burn data to 571 in the 2021 growing season following the prescribed fire. Gradual mortality of seedlings and young plants lowered the frequency down to 229 in 2022, 188 in 2023, and 165 in 2024.

The percent aerial cover<sup>3</sup> of sedges in the treatment transects fell in the first year following the prescribed fire from around 4.1% to 3.5% due to a dramatic decline in the percent cover of painted sedge (*Carex picta*) in the few quadrats where it was abundant. However, the maturing seedlings recruited after the fire then drove the percent cover up to 5.8% in 2022, 7.6 % in 2023, and 8.9 % in 2024.

The frequency and percent cover of sedges in the control areas also increased; however, most of the increase occurred between initial monitoring in 2018 and its resumption in 2021. Favorable moist growing seasons during this period may account for the increase. Unlike the treatment transects, no flush of seedlings was evident in the control transects in 2021. Although small increases in

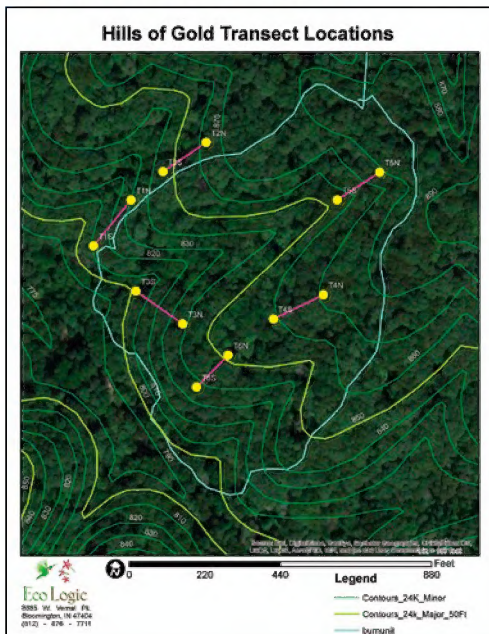


Diagram showing location of sampling transects (T1 to T6) at the Laura Hare Preserve, part of the Hills of Gold natural area in southern Johnson County, Indiana. Transects T1 and T2 were sited in an adjacent non-burn area, while transects T3 to T6 were within the area of prescribed burn.



# in Prescribed Fire Monitoring Study

frequency and percent cover were noted in 2022, the frequency and percent cover in the control transects both declined in 2023 and were nearly level in 2024. In short, the post-burn control and treatment transects had very different trajectories (see graph at bottom right).

The community of woodland sedges found at the Blossom Hollow study site is noteworthy for its number of conservative species (as expressed via coefficients of conservatism (C)). The C-values<sup>4</sup> of sedge species present ranged from 3 to 9 with a mean C of 6.4. A summary of the species and their C-values is shown in the table at right.

The high mean C of the sedges in this mature woodland makes their response to the fire particularly noteworthy. Generally, one expects species with low C-values (i.e., 3 or less) to proliferate after disturbance; something that was seen with the emergence of burnweed (*Erechtites hieraciifolius*) and white snakeroot (*Ageratina altissima*) in several of the quadrats following the fire. However, these woodland sedges apparently thrive with removal of the leaf litter that encourages germination and the increased light resulting from woody plant mortality.

Another unexpected result was a conservative sedge species that responded differently to prescribed fire. The cover of painted sedge declined following the prescribed fire. The clumps, which occurred in two treatment quadrats located on a south-facing slope, declined from 20% and 45% cover in 2018 prior to the burn to 6% and 12% cover respectively after the burn. In the fourth growing season following the burn, clumps recovered to 12% and 25% cover. In contrast, the quadrat containing painted sedge in the control transects remained steady at 2% cover between 2018 and 2024. Similar declines in painted sedge cover were noted at other sites in the Brown County Hills following prescribed fire. Ecologically, painted sedge can be a dominant ground cover in dry, acid woods over non-calcareous rocks from Blossom Hollow southward to Alabama and Mississippi. Like other rhizomatous sedges, it is likely that recruitment from seed is uncommon in this species, and instead it emphasizes slow vegetative spread.

This ongoing study, conceived by Central Indiana Land Trust President Cliff Chapman and funded by the Herbert Simon Family Foundation,

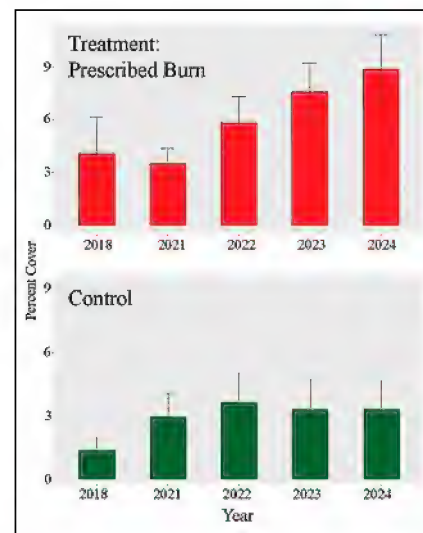
Scientific Name	Common Name	C
<i>Carex albicans</i> var. <i>albicans</i>	blunt-scaled oak sedge	6
<i>Carex cephalophora</i>	short-headed bracted sedge	3
<i>Carex communis</i> var. <i>communis</i>	common beech sedge	8
<i>Carex cumberlandensis</i>	concealed sedge	8
<i>Carex digitalis</i>	narrow-leaved wood sedge	7
<i>Carex laxiculmis</i> var. <i>copulata</i>	spreading sedge	5
<i>Carex laxiflora</i>	beech wood sedge	7
<i>Carex picta</i>	painted sedge	7
<i>Carex rosea</i>	curly-styled bracted sedge	5
<i>Carex swanii</i>	downy green sedge	4
<i>Carex timida</i>	timid sedge	9
<i>Carex willdenowii</i>	Willdenow's grass sedge	8
<b>Mean C</b>		6.4

illustrates the importance of monitoring plant communities following restoration efforts. The positive effects on seedling recruitment of most sedge species and the negative effects on painted sedge can help inform future management decisions such as fire frequency and fire seasonality. In the absence of monitoring there are only assumptions of the success of restoration practices. Quadrat data provided by monitoring can either confirm success of those practices or the need to revise them to meet restoration goals.

## Footnotes

- 1 quadrats - sampling plots used in vegetation studies.
- 2 seed bank - a reservoir of viable seeds stored in the soil.
- 3 percent aerial cover - an estimate of the average amount of area a species occupies in the quadrats.
- 4 C-values range from 0 to 10. Conservative species, characteristic of ecosystems with minimal human disruption, fall in the C = 7 to 10 range.

Kevin Tunesvick, a member of the East Central Chapter of INPS, is a Senior Ecologist with Eco Logic, LLC.



Bar graphs showing the amount of area occupied by sedges over five sampling years: the top graph shows an overall increase in cover following prescribed fire, especially over the period 2022-2024; in contrast, the bottom graph shows that control plots had only modest increases in cover over the same time period.



# INPS Partners with Butler University

## By Jill Casey

On Monday, September 30, 2024, the Indiana Native Plant Society and Butler University students, faculty, staff, and community volunteers replanted Holcomb Gardens with approximately 3,700 native plants representing 85 species. During the full-day community event, many INPS members served as lead gardeners and educators for the project, enabling the participation of over 400 volunteers, including those without gardening experience. Educators taught volunteers about the benefits of native plants, including their support for biodiversity and their adaptation to local conditions.

Holcomb Gardens is a space with a unique history and provides an opportunity to showcase native plants to the community in a formal setting. Established in 1928 by Butler Professor Willard Nelson Clute (see his biography in the fall 2021 issue of the INPS Journal) and redesigned and replanted in 1948 by James Irving Holcomb and Arthur F. Lindberg, Holcomb Gardens fell into disrepair during the 2020 COVID-19 pandemic. The once vibrant public greenspace had largely been converted to non-native turf grass following pandemic-related staffing shortages and incidents of vandalism and plant theft.

The gardens are located in the northern portion of campus, east of the Indianapolis Greenway Canal and north of the Holcomb Observatory and Planetarium, and are intended to serve as a public park and community gathering place. They feature 12 formal garden beds, with shade-tolerant, part-sun, and full-sun plants represented. All species are native to Indiana, and all plants used are “straight species.” The INPS Landscaping with Natives team provided the designs for each bed and assisted with sourcing all plant materials. When possible, designers Coralie Palmer, Sarah Gray, and Elise Hagan adhered to the original vision and species in the 1948 designs, which featured a significant number of native species. Using historical documents, pictures, and some of the original design plans from earlier iterations of the gardens from Butler’s archives, the design team sought to translate and adapt the original concepts. Native species used in earlier plantings at the site were included wherever possible, and the ecological role of the plantings was central to the design.

The planting also included two full days of setup from INPS and Butler core teams in poor weather conditions. To ensure a smooth planting day for volunteers, the core team members marked each bed with signage, roped off each bed into one-foot sections, created plant stakes for each species in the bed, and set the required number of plants for each design at their respective beds.



*Butler's First Lady, Bethanie Danko, provided hands-on leadership.*



*Members of Butler's core team prepositioned plants at the dozen flower beds.*

All photos courtesy of Coralie Palmer



# to Replant Holcomb Gardens

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This project was funded through a Lilly Endowment grant and contributions from individual donors and is part of the University's Sustainability and Climate Action Plan, which includes a broader effort to "rewild" parts of campus by planting native prairies and gardens, establishing no-mow zones, and reducing the use of pesticides. Three-and-a-half acres of campus have already been converted, which is expected to reduce the use of landscaping chemicals by 36,000 lbs. annually – a significant step in Butler's goal to reduce greenhouse gas emissions by 45 percent by 2030 and achieve net carbon neutrality by 2050.

The planting is also part of the Butler Gateway Project, which aims to enhance the broader Indianapolis Midtown community. The gardens are set to include permanent educational signage with expertise provided by INPS and the Butler College of Education. The signage is projected to be installed this spring and will focus on providing an accessible experience for visitors.

INPS is continuing to collaborate with Butler, Purdue Extension Master Gardeners, and Keep Indianapolis Beautiful on the ongoing stewardship plans for the gardens to ensure that this beautiful space will remain a valuable part of the Indianapolis community for decades to come. The Butler project is also part of INPS's broader goal of creating ecological corridors throughout the city, supported by other extensive native plantings, including the Eiteljorg Museum, Belmont Beach, and Newfields. By creating and conserving larger native plantings, INPS seeks to support biodiversity and reduce the negative effects of habitat fragmentation.

INPS is thankful for this wonderful opportunity to work with Butler University on this beautiful site and for all INPS members and volunteers who made this project possible. Bethanie Danko, Butler University's First Lady, led the project on behalf of the University in collaboration with Andrea Stearly, Executive Director of Presidential Events; Noelle Schact, Presidential Fellow; John Lacheta, Director of Facilities & Maintenance Services; Julia Angstmann, Executive Director of Sustainability; Tim Dorsey, Manager of the Farm at Butler; Julie Lindemann, Assistant Director of Operational Sustainability; and several faculty members within the Department of Biological Sciences. Key INPS members providing design, preparation, and support for the planting day included Coralie Palmer, Elise Hagan, Sarah Gray, Jill Casey, Cátia Canteiro, and Brooke Alford. Watch for a detailed dive into the garden's design in the Summer issue of the INPS Journal.

*Jill Casey is the Program Facilitator for the Indiana Native Plant Society and a member of the Central Chapter.*



*Elise Hagan and Cátia Canteiro used cordage to create 1×1 foot planting grids in each flower bed.*



*The handiwork of planting volunteers is evident in this full sun bed.*



# Joe Cox's Trees Live On

**By Paul Rothrock**

## Part 3

Joe Cox's woods, known today as Pioneer Mothers' Memorial Forest, almost came to be cut down in the early 1940s after his death at age 83. Up until that point the old man, with



P. Rothrock

*Indiana's rich woodland flora is particularly glorious in April. This woods (above) has diverse tree species and drifts of Virginia bluebells intermixed with sedges (Carex spp.), sharp-lobed hepatica (Anemone acutiloba), and spring beauty.*

his deep love of his old-growth forest and especially his magnificent black walnut trees, had found refuge with nieces and nephews and had successfully kept his forest intact. Joe was thought of as an unusual man: quiet, gentle, and one who enjoyed many hours alone in his forest.

With Joe's death, his nephew, Arthur Farlow, was named administrator of the estate. It seemed as though there was no reasonable way that Joe's wishes, to keep his forest intact, might be fulfilled. The Paoli Meridian Club, long-time friends of Joe, had tried to find a way to save the forest, but seemed powerless. Thankfully a miracle was about to unfold. Here is an excerpt of those events as chronicled in The Saturday Evening Post article by Andrew H. Hepburn from January 31, 1942.

"There were numerous heirs, widely scattered. The trees would have to be sold.

The Meridian Club members talked among themselves about the matter. Mr. Raymond Stout was named chairman of a committee to see what, if anything, might be done....

In April, Clyde A. Taylor, Paoli correspondent for Indianapolis and Louisville papers, went out to the tract with Mr. Farlow and timber buyers, who planned to bid on it. Taylor took pictures and they were published in the papers he represented.

A week later, a delegation of forestry experts, making a tour of the proposed Benjamin Harrison National Forest project, which is to range over 700,000 acres of Southern Indiana, made a side trip to look over Cox Woods. With them were newspapermen from Indianapolis, including Maurice Early, whose daily front-page-editorial column is a widely read Indiana feature, and Forest Service experts, including R.H. Grabow, supervisor of all National Forest projects in Indiana.

The experts beheld with amazement. They saw something unique, a mature and perfect forest. They transmitted their enthusiasm to the newspapermen present. The next day Maurice Early wrote an editorial about the tract. Then the impossible began to happen. Mail poured into Paoli. Letters demanded that a campaign be launched to save the trees. Most of the letters contained money. From all over the state people began to flock to the forest....

Paoli people were astonished. The forest had always been on their doorstep; no one ever thought of it as being especially remarkable. Yet here were experts claiming that Cox Woods was peerless.

Members of the Meridian Club went back into action again behind the leadership of Raymond Stout....

But time was against the campaign. The court order requiring the sale of the tract had long since been issued. A date for a public sale had been set.

Most voluntary subscriptions had been small.... By the date of the sale only a fraction of the amount considered necessary had actually been raised. So the trees were sold for lumber....

Then three things happened to permit Joe to sleep in peace. First, the company which



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had bought the tract, proposing to use it in the manufacture of fine furniture, agreed to leave it intact, and to sell it back untouched if the money for its purchase could be raised by a designated date several months away.

The Meridian Club renewed its efforts. They bore fruit.... In Indiana the Pioneer Mothers' Memorial Association is made up of descendants of those who, like the original Joseph and Mary Cox, came into Indiana during the pioneer days.

The Pioneer Mothers voted to donate the entire sum in their treasury, \$5900, to the forest fund, on condition that it would be officially known as the Indiana Pioneer Mothers' Memorial Forest.... Then came the decisive event. Dr. J. Alfred Hall, of the United States Forest Service, one of the first experts to discover the unique character of the tract, had gone to Washington enormously impressed with Cox Woods. He appealed to the National Forest Reservation Commission for funds to preserve the tract for the nation....

Doctor Hall's plea boiled down to this: Here, and only here, is a perfect forest. To fail to preserve it would be a calamity. Doctor Hall pleaded his case well. The commission voted to provide the additional money needed to repurchase the tract from the lumber company — about half of a necessary \$25,000 total — on condition that it would be preserved by the Forest Service as a forest museum. There was jubilation in Paoli, and no doubt Joe's restless spirit found peace at last. Now he could sleep. His trees were safe."

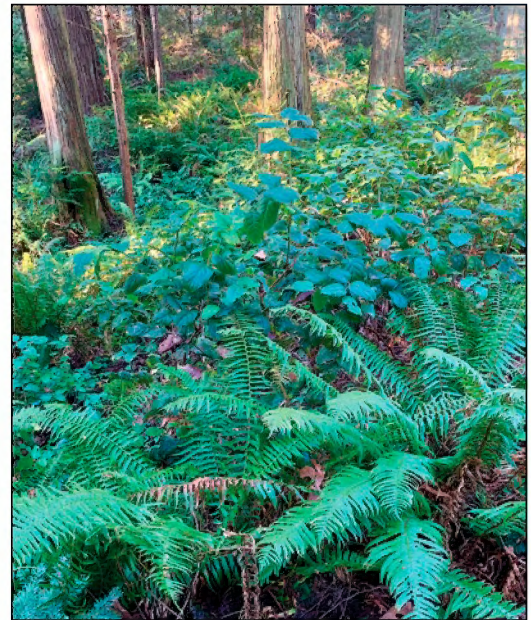
To stop here would not be honest to the story. One thing we have learned over the decades is that living ecosystems are not static. Thus, preserves need sophisticated management, which some of our regional land trusts are striving to provide. And then there are public perceptions to take into account. As the original article observed,

"An additional problem was curious. The majority [of visitors to Joe's Woods] went away disappointed. They had been led to believe that they would find a grove of enormous trees, of spectacular girth and

height, dwarfing California redwoods. They found big trees, but most [trees] seemed to unschooled eyes like those which would be found in any woods. They found the forest carpeted by a tangled mat of vines and plants, which made walking difficult. They were like the thousands who flock to stare at the Venus de Milo and go away wondering why anyone would get excited over a statue without arms."

This has long been the fault of Hoosiers with their "aw shucks" attitude. We too often fail to appreciate the special qualities of Indiana's rich and verdant flora. We have lacked the voice of a John Muir and perhaps the photographs of the likes of Ansel Adams. Indiana has a more subtle, but still equally glorious, reality. Not tall mountains but rolling hills. Not barren rock but richly vegetated outcrops and slopes. On a personal note, I have resided in Washington state for several spring times. I do not see the carpets of Virginia bluebells (*Mertensia virginica*), spring beauty (*Claytonia virginica*), trillium (*Trillium* spp.), violets (*Viola* spp.), toothwort (*Cardamine* spp.), etc., etc. gracing the spring flora of the Pacific Northwest. Spring wildflowers here pale in comparison. Much of the forest ecosystem is dominated by the shade of conifers and the few woody species (e.g., salal, *Gaultheria shallon*) and sword fern (*Polystichum munitum*) that can find a niche beneath dense and persistent shade. Hoosiers should rejoice in the glorious native flora that is theirs. It is nothing short of miraculous!

*Paul Rothrock, a member of the Central Chapter of INPS, likes to return to Indiana and see "real" trees, in lieu of the Christmas trees that characterize Washington forests.*



P. Rothrock

*By contrast, this lowland forest in King County, Washington has two tree species in the canopy (western arborvitae (*Thuja plicata*) and Douglas fir (*Pseudotsuga menziesii*)) and few if any spring ephemerals. The ground layer is dominated by husky sword fern and salal.*





## Indiana Native Plant Society

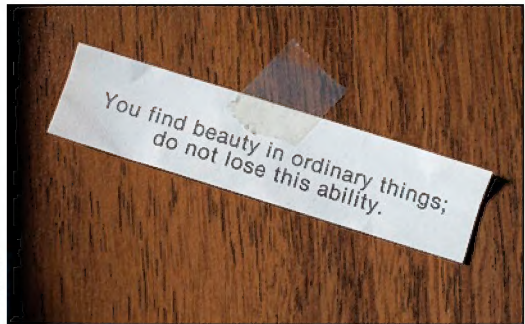
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# The Sense of Wonder

**By Lee Casebere**

Earlier this year, I rediscovered a tiny piece of paper that I had taped to the inside of a cabinet in my den. Recollection reminded me that I had gotten it from a fortune cookie and found it sufficiently meaningful to keep. It said, "You find beauty in ordinary things; do not lose this ability." Seeing that cookie-fortune sparked memories from my youth that harken back to the origins of my journey into natural history and nature appreciation. From those memories comes a story that links a book, an old clunky car, my grandparents' farm, and a high school girlfriend.



L. Casebere

*The wisdom of a fortune cookie.*

As far back as I can remember, I was interested in nature. The interconnectedness of plants and animals with their surroundings fascinated me. Even before "ecology" became a household word, its principles captured my sensibilities at a young age, and they were solidly part of my persona by the time I was in high school.

The fortune cookie memento reminded me of a book that was influential in the development of my relationship with the natural world – *The Sense of Wonder* by Rachel Carson (1965). The main premise of the book is to encourage parents to foster a sense of wonder about nature in children even if the parents know little about the subject or even if it means that their child will get wet and dirty.

The following excerpt sums up the gist of the book rather well:

"A child's world is fresh and new and beautiful, full of wonder and excitement.

It is our misfortune that for most of us that clear-eyed vision, that true instinct for what is beautiful and awe-inspiring, is dimmed and even lost before we reach adulthood. If I had influence with the good fairy who is supposed to preside over the christening of all children I should ask that her gift to each child in the world be a sense of wonder so indestructible that it would last throughout life, as an unfailing antidote against the boredom and disenchantments of later years, the sterile preoccupation with things that are artificial, the alienation from the sources of our strength."

I have a habit of writing the date for when I buy a book on the inside back cover; my copy



P. Rothrock

*A foggy morning beckoned my girlfriend and I to the woodland tapestry in the "back-forty" where we hoped to hear wood thrush songs.*

*Wonder* — continued on page 9